

REMARKS

A. Background

Claims 35-64, 92 and 93 were pending in the application at the time of the Office Action. Claims 35-64, 92 and 93 were rejected as being anticipated by and/or obvious over cited art. By this response Applicant has amended claims 35, 36, 39, 49-51, 60, and 92 and has added new claims 94-107. As such, claims 35-64 and 92-107 are presented for the Examiner's consideration in light of the following remarks.

B. Proposed Amendments

Applicant has herein amended claims 35, 36, 39, 49-51, 60, and 92 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a notice of allowance. For example, independent claim 35 has been amended to recite that the means for securing a fastener is configured such that "the fastener is rigidly fixed to the body." Similarly, independent claim 49 has been amended to recite an elongated fastener "configured to rigidly mount to the implant." Independent claim 92 has been amended to recite that the distal end of the elongated fastener is mounted to the implant "by threaded engagement." Other clarifying amendments have also been made herein to the claims.

Applicant has also added new claims 94-107. Applicant asserts that new claims 94-107 read on the subject matter previously elected by Applicant.

The new claims and the amendments to the pending claims are supported in the application at least by Figures 17 and 22 and the corresponding discussion in the specification. In view of the foregoing discussion, Applicant submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

C. Rejection on the Merits

1. Objections

Page 2 of the Office Action objects to claim 35 based on a formal matter and suggests a remedying amendment. Applicant has herein amended claim 35 as suggested by the Office Action and therefore submits that the objection has been rendered moot and should be withdrawn.

2. Anticipation Rejection

Pages 2 and 3 of the Office Action reject claims 35-41, 43-45, 48-53, 55, 57-64, 92, and 93 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 4,673,407 to Martin (“*Martin*”). Of the rejected claims, claims 35, 49, and 92 are independent claims. Applicant respectfully traverses this rejection and submits that *Martin* does not anticipate claims 35-41, 43-45, 48-53, 55, 57-64, 92, and 93 at least because *Martin* does not include each and every claim limitation recited in the rejected claims.

Martin discloses an implant used for joint replacement in a bone. See Abstract. As shown in Figure 1, the *Martin* implant 22 comprises an inner plate member 24 that abuts the resected bone, and an outer joint member that is positioned on the inner plate member 24. See col. 4, lines 49-57. The inner plate member 24 includes wells 34, each having a cap 40 with a hole 42 therein through which a screw 36 can be inserted to attach the implant to the bone. See col. 4, lines 61-67.

The *Martin* screw 36 has an enlarged head 52 on one end and a threaded portion 48 on the other end. The threaded portion 48 of the screw 36 is passed down through hole 42 and then

threaded into the bone (or, in a variation, into a plug 78 that is already positioned within the bone) so as to rigidly anchor the screw 36 to the bone. See col. 5, lines 24-29. The threaded portion 48 of the screw 36 is also referred to as the “attachment element,” and the head 52 and body of the screw 36 is referred to as the “connecting member.” See col. 5, lines 29-38. The head 52 of the screw 36 seats the implant 22 against the bone.

According to *Martin*, “[a] key object of this invention is to avoid constraining the transfer of physiologic forces from the subarticular portion of the prosthesis to the adjacent bone.” Col. 6, lines 22-25. Correspondingly, *Martin* discloses that one of the important features of the *Martin* implant is “to allow relative axial and lateral movement of the screw with respect to the implant.” Col. 4, line 68 to col. 5, line 3; see also Abstract, col. 5, line 38-41; col. 10, lines 36-42. To allow for this movement, a spring 56 is positioned between the head 52 of the screw 36 and the cap 40. See Figure 1. This spring 56 allows the implant to move in response to various external forces. See Figures 2-5 and col. 6, line 43 to col. 7, line 24. In an alternative disclosed embodiment, the spring 88 is located in the plug 78 that has already been positioned in the bone and the head of the screw 76 rests against the cap 72 of the implant 62. See Figure 6. In this embodiment, *Martin* discloses that the cap 72 “provides a concave surface which forms the socket in a ball-and-socket joint between the implant and the connecting member, to allow swinging movement of the connecting member with respect to the well.” Col. 8, lines 9-13.

In sum, the *Martin* implant is specifically designed to be moveable relative to the connecting member that connects the implant to the bone so as to allow certain forces to be transferred to the bone.

Because the connecting member and the implant in *Martin* are freely movable relative to each other, Applicant submits that *Martin* does not disclose or suggest an implant “comprising a

body having a first side with a top articular surface and an opposing second side with a bone apposition surface, the bone apposition surface being adapted to bias against a natural or resected articulating surface of a bone; and means for securing a fastener to the second side of the body after the bone apposition surface is biased against the natural or resected articulating surface **such that the fastener is rigidly fixed to the body**,” as recited in amended claim 35. Similarly, Applicant submits that Martin does not disclose or suggest an implant system which includes “an elongated fastener **configured to rigidly mount to the implant** so as to outwardly project from the bone apposition surface,” as recited in amended claim 49.

Furthermore, because Martin only discloses a threaded connection between the screw and the bone and between the screw and the plug within the bone and further specifically teaches moveable engagement between screw and the implant, Applicant submits that Martin does not disclose or suggest an implant system having “an elongated fastener ... **mounted to the implant by threaded engagement**,” as recited in amended claim 92.

In view of the foregoing, Applicant respectfully requests that the anticipation of claims 35, 49, and 92 be withdrawn.

Claims 36-41, 43-45, 48, 50-53, 55, 57-64, and 93 each depend from one of claims 35, 49, and 92 and thus incorporate the limitations thereof. As such, Applicant submits that claims 36-41, 43-45, 48, 50-53, 55, 57-64, and 93 are distinguished over the cited art for at least the same reasons as discussed above with regard to claims 35, 49, and 92. Accordingly, Applicant respectfully requests that the anticipation rejection with respect to claims 36-41, 43-45, 48, 50-53, 55, 57-64, and 93 also be withdrawn.

Applicant further submits that many of the dependent claims are independently distinguishable over *Martin*. For example, claims 36 and 39 recite “a blind socket” formed on

the implant. In contrast, the wells 34 on the *Martin* implant are necessarily open at both ends so as to form a passage that extends through the implant. This passage is necessary so that the screw 36 can be passed down through well 34 of *Martin* and screwed into the bone.

As another example, claims 48 and 55 recite that the body comprises two separate connectable parts in which each part comprises “a portion of the top articular surface and the bone apposition surface.” Applicant submits that this limitation is not disclosed in *Martin*.

In addition, Applicant submits that it would not have been obvious to modify the *Martin* implant to include the above identified deficiencies. For example, as noted above, *Martin* discloses that the ability to provide relative movement between the implant and the screw is “an important feature of the invention” to allow the implant to transfer various physiologic forces from the prosthesis to the bone. If the connection between the implant and the screw were changed to be a rigid connection, such as by threaded engagement, this “important feature” of *Martin* would be lost, rendering the *Martin* implant unsatisfactory for its intended purpose. As is well established, if a modification would render an invention unsatisfactory for its intended purpose, that modification would not have been obvious. See MPEP § 2143.01 (V).

3. Obviousness Rejection

Pages 3 and 4 of the Office Action reject claims 42 and 56 under 35 USC § 103(a) as being unpatentable over *Martin*. Specifically, the Office Action asserts that it would have been obvious to use claimed stem and fastener length ranges. Page 4 of the Office Action rejects claims 46, 47, and 54 under 35 USC § 103(a) as being unpatentable over *Martin* in view of U.S. Patent No. 4,000,525 to Klawitter et al. (“*Klawitter*”). *Klawitter* is cited simply for allegedly teaching the use of a porous inlay. Applicant respectfully traverses these rejections and submits

that even if, *arguendo*, it was obvious to make the aforementioned modifications to *Martin*, the resulting combinations would still not teach or suggest all of the claim limitations.

That is, each of claims 42, 46, 47, 54, and 56 depend from one of claims 35 or 49 and thus incorporate the limitations thereof. As such, Applicant submits that claims 42, 46, 47, 54, and 56 are distinguished over the cited art for at least the same reasons as discussed above with regard to claims 35 and 49. Accordingly, Applicant respectfully requests that the obviousness rejections with respect to claims 42, 46, 47, 54, and 56 be withdrawn.

No other objections or rejections are set forth in the Office Action.

E. New Claims

Applicant submits that each of new claims 94-107 is distinguished over the cited art of record. For example, new dependent claims 95 and 100 recite “the tray further comprises a top surface opposite the bone apposition surface and the means for securing a fastener is configured so as to be inaccessible from the top surface of the tray.” New dependent claims 98, 99, 104, and 105 include a “means for attaching a fastener driver to the ... end of the fastener,” and provide various limitations to the means for attaching. New dependent claim 101 recites that the crown nut is “rotatable relative to the bone anchor.” New dependent claims 102, 103, 106, and 107 include a “means for attaching an attachment tool to the nut.” and provide various limitations to the means for attaching. Applicant submits that none of the cited art, alone or in combination, includes these recited limitations in combination with the other limitations of claims 94-107.

Furthermore, claims 94-107 each depend from one of claims 35, 49, and 92 and thus incorporate the limitations thereof. As such, Applicant submits that claims 94-107 are also

distinguished over the cited art for at least the same reasons discussed above regarding claims 35, 49, and 92.

F. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 35-64 and 92-107 as amended and presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 28th day of January 2008.

Respectfully submitted,

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